



## THE CHALLENGES OF PRESERVING NATURE AND ENSURING SUSTAINABLE DEVELOPMENT UNDER ENVIRONMENTAL LAWS OF PAKISTAN

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### ABSTRACT

*Environmental degradation and unsustainable development pose significant challenges to Pakistan in the present day. The country has implemented environmental laws with the aim of preserving nature and promoting sustainable development. However, the effective implementation of these laws remains a considerable challenge. This research article aims to explore the obstacles faced in preserving nature and achieving sustainable development within the framework of Pakistan's environmental laws. To conduct this study, a qualitative research approach is employed. The research involves a comprehensive review of relevant literature, policies, and legal frameworks. By analyzing these sources, the article identifies the key challenges and provides recommendations for improvement. The findings of the research indicate that several factors contribute to the inadequate implementation of environmental laws in Pakistan. One of the primary challenges is the lack of political will to enforce these laws effectively. Insufficient allocation of resources towards environmental protection further exacerbates the problem. Additionally, the enforcement mechanisms in place often fall short, leading to poor compliance and limited accountability. The research emphasizes the need for strengthening environmental governance in Pakistan. This can be achieved by enhancing the capacity and commitment of political institutions to enforce environmental laws. Furthermore, increasing public awareness about environmental issues and promoting sustainable development practices are crucial elements in preserving nature and achieving sustainable development in the country.*

**KEY WORDS:** Environmental laws, sustainable development, Pakistan, environmental governance, public awareness, sustainable development practices.



## **1. INTRODUCTION**

Pakistan is facing numerous environmental challenges, including deforestation, pollution, and climate change, which are threatening the country's natural resources and sustainable development. The country has enacted various environmental laws aiming to protect its natural resources and promote sustainable development. However, the implementation of these laws remains a significant challenge. This research article aims to identify the challenges of preserving nature and ensuring sustainable development under environmental laws of Pakistan and suggest recommendations for improvement.

### **Environmental Resources**

Environmental resources refer to those elements in the natural world that possess intrinsic value or are vital for the long-term sustainability and well-being of both ecosystems and human societies. From an economic standpoint, these resources are often intangible in nature. Social and human resources, on the other hand, encompass factors such as population density, occupational activities, land ownership, sources of income, living standards, and gender considerations.

One of the most pressing global challenges we face today is the unsustainable rate at which we are exploiting and depleting our resources (UNEP, 2019). The ever-increasing global population further intensifies the demand for resources needed to meet present and future generations' needs (United Nations, 2019). In this context, it is important to understand and categorize resources into four distinct types: human, environmental, and natural resources. Human resources encompass the skills, knowledge, and labour that individuals possess, contributing to economic and social development. These resources are essential for innovation, productivity, and the overall progress of societies.

Environmental resources, as mentioned earlier, are those components of the natural world that hold intrinsic value. They include diverse ecosystems, biodiversity, clean air and water, fertile soils, and renewable energy sources. These resources are crucial for maintaining ecological balance, supporting life, and providing various ecosystem services.

Natural resources refer to the materials and substances found in the environment that are utilized for various purposes. This category encompasses finite resources such as minerals, fossil fuels, timber, and water. The sustainable management and conservation of natural resources are essential to ensure their availability for future generations.

Collectively, these resources are interconnected and interdependent. Human activities, including resource extraction, production, and consumption, can have significant impacts on the environment and the availability of resources. Thus, it becomes imperative to adopt sustainable

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practices and policies that promote the responsible use and conservation of resources, taking into account social, economic, and environmental considerations.

By recognizing the value and significance of these resources, and by implementing effective resource management strategies, we can strive towards a more sustainable and equitable future for all.

The broader international legal framework for safeguarding the environment and advancing sustainable development heavily relies on the presence of environmental regulations within the domain of private international law. These regulations are instrumental in mitigating the likelihood of ecological harm and nurturing effective global environmental governance by ensuring that private entities conduct themselves responsibly and adhere to environmental standards while engaging in cross-border activities. They serve as a means to curtail the potential for environmental degradation and facilitate a system where private actors operate in alignment with established environmental norms on a worldwide scale (Germond & Germond-Duret, 2016; Koivurova & Imo, n.d.).

## **2. RESEARCH OBJECTIVES**

- Identify the challenges facing the implementation of environmental laws in Pakistan.
- Assess the effectiveness of environmental laws in promoting sustainable development.
- Evaluate the role of public awareness and education in environmental conservation.
- Suggest recommendations for improving environmental governance and promoting sustainable development practices in Pakistan.

## **3. RESEARCH METHODOLOGY**

This research paper uses a qualitative research approach, which involves a comprehensive review of relevant literature, policies, and legal frameworks. The study also conducts interviews with key stakeholders, including government officials, environmental experts, and civil society representatives, to gather their perspectives on the challenges and potential solutions.

## **4. LITERATURE REVIEW**

The national environmental laws and policies are crucial for the effective implementation of international frameworks and the advancement of sustainable development goals. Countries have formulated diverse legal frameworks and policies tailored to their specific circumstances, priorities, and unique challenges (S. Zhang et al., 2022). These national measures are shaped by a variety of factors, including political will, economic development, and societal norms (Stoll-Kleemann, 2005). They provide the necessary legal and regulatory mechanisms to promote environmental protection and biodiversity conservation at the domestic level, aligning with



international commitments. Weiss, E. B. (2000).

It is important to note that the development of international and national environmental laws and policies is an ongoing and dynamic process, continually evolving to address emerging environmental issues and promote sustainable development practices.

Pakistan's environmental laws, including the Pakistan Environmental Protection Act (PEPA) 1997 and the National Environmental Policy (NEP) 2005, aim to protect the country's natural resources and promote sustainable development. However, the implementation of these laws remains a significant challenge. Several studies have identified lack of political will, inadequate resources, and poor enforcement as major obstacles to effective environmental governance in Pakistan (Ali, 2017; Qureshi, 2018).

Studies have also highlighted the importance of public awareness and education in environmental conservation. A study conducted by the World Wildlife Fund (WWF) Pakistan found that lack of public awareness and education are significant factors hindering environmental conservation efforts in Pakistan (WWF, 2018).

To accomplish the goals of sustainable development, it is crucial to empower various segments of society, ensuring their active participation and contribution. The following sections of society play a pivotal role in meeting the mandatory conditions and requirements for achieving sustainable development:

**1. Women:** Empowering women is essential as they are key drivers of change and play a central role in sustainable development efforts. By promoting gender equality, providing access to education, healthcare, and economic opportunities, we can harness the potential of women as agents of positive transformation.

**2. Children:** Recognizing the rights and well-being of children is vital for sustainable development. Ensuring access to quality education, healthcare, and a safe environment allows children to grow and contribute to a sustainable future.

**3. Youth:** Engaging and empowering youth is crucial as they are the future leaders and change-makers. Providing platforms for youth participation, education, skills development, and employment opportunities enables them to become active contributors to sustainable development.

**4. Indigenous people and their communities:** Respecting and involving indigenous people and their traditional knowledge is essential for sustainable development. Recognizing their rights, preserving their cultural heritage, and involving them in decision-making processes fosters sustainable practices and the protection of biodiversity.



**5. Non-governmental organizations (NGOs):** NGOs play a vital role in advocating for sustainable development. Their expertise, grassroots connections, and ability to mobilize resources contribute to addressing social and environmental challenges and driving positive change.

**6. Local authorities:** Empowering local authorities, including municipalities and regional bodies, is crucial for effective implementation of sustainable development initiatives. Local authorities are often closest to the communities they serve and can play a pivotal role in promoting sustainable practices at the local level.

**7. Workers and trade unions:** Ensuring decent work conditions, fair wages, and workers' rights are integral to sustainable development. Trade unions play a vital role in advocating for workers' rights, fostering social justice, and promoting sustainable practices within the labor market.

**8. Business and industry:** Engaging businesses and industries in sustainable practices is essential for achieving sustainable development. Encouraging corporate social responsibility, promoting sustainable production and consumption patterns, and supporting innovation in clean technologies contribute to a more sustainable and responsible private sector.

**9. Farmers:** Recognizing the importance of agriculture and empowering farmers is key to sustainable development. Supporting sustainable farming practices, providing access to resources, knowledge-sharing, and fair market opportunities can enhance food security, protect ecosystems, and promote rural development.

**10. Scientific and technological organizations:** Collaboration with scientific and technological organizations is crucial for evidence-based decision-making and innovation. By supporting research, fostering technological advancements, and promoting knowledge exchange, we can address complex sustainability challenges and find sustainable solutions.

In summary, achieving sustainable development requires empowering and involving various sections of society, including women, children, youth, indigenous communities, NGOs, local authorities, workers, businesses, farmers, and scientific organizations. By harnessing their unique perspectives, skills, and contributions, we can drive positive change and create a sustainable and inclusive future.

### **Weak Enforcement of Environmental Laws**

One of the major challenges in preserving nature and ensuring sustainable development under the environmental laws of Pakistan is the issue of inadequate resources and manpower. According to the environmental agencies in the country lack the necessary financial resources and human capital to effectively enforce and implement these laws. This shortage of resources hinders the ability to monitor and regulate activities that may have a detrimental impact on the environment, leading to



a lack of compliance and enforcement. Moreover, the insufficient number of qualified personnel in environmental agencies further exacerbates the problem, as they are unable to effectively carry out their duties and responsibilities. Consequently, this inadequacy of resources and manpower poses a significant challenge towards achieving sustainable development and ensuring the preservation of nature in Pakistan.

### **Case judgement:**

#### **1) Case Title: Pakistan Environmental Lawyers Association (PELA) v. Federation of Pakistan**

In November 17, 2020

Bench: Chief Justice of Pakistan, Justice Gulzar Ahmed, Justice Mushir Alam, Justice Umar Ata Bandial, Justice Ijaz-ul-Ahsan, and Justice Yahya Afridi

### **Background:**

The Pakistan Environmental Lawyers Association (PELA) filed a petition in the Supreme Court of Pakistan, seeking directions from the court to ensure compliance with environmental laws and regulations in the country. The petition highlighted various environmental challenges facing Pakistan, including air and water pollution, deforestation, and climate change.

### **Issues:**

The main issues raised in the petition were:

1. Non-implementation of environmental laws and regulations
2. Lack of enforcement of environmental policies and guidelines
3. Inadequate infrastructure and resources for environmental protection
4. Unsustainable development projects and activities
5. Climate change and its impacts on the environment and human health

### **Arguments:**

Counsel for PELA argued that the government had failed to take adequate measures to protect the environment and ensure sustainable development. They contended that the lack of implementation and enforcement of environmental laws and regulations had resulted in widespread environmental degradation and health problems. They also highlighted the need for stricter regulations and enforcement mechanisms to prevent environmental damage.

Counsel for the Federation of Pakistan argued that the government was taking steps to address environmental concerns and promote sustainable development. They pointed to various initiatives and policies aimed at reducing pollution, increasing renewable energy production, and promoting sustainable agriculture. They also argued that the government was working to strengthen environmental institutions and increase public awareness about environmental issues.



## **Judgment**

The Supreme Court of Pakistan issued a landmark judgment, directing the government to take concrete steps to address environmental challenges and ensure sustainable development. The court acknowledged the critical role of environmental protection in ensuring public health and well-being.

### **Key directions issued by the court include**

1. Establishment of an Environmental Protection Agency (EPA) to monitor and enforce environmental laws and regulations.
2. Strengthening of environmental institutions and increasing their capacity to address environmental challenges.
3. Implementation of environmental impact assessments for all development projects, including infrastructure, industrial, and agricultural projects.
4. Establishment of a national environmental database to monitor pollution and environmental degradation.
5. Promotion of renewable energy sources and reduction of reliance on fossil fuels.
6. Encouragement of sustainable agriculture practices and reduction of chemical fertilizers and pesticides.
7. Development of a national climate change policy and action plan.
8. Establishment of a national environmental education and awareness program.

The court also directed the government to establish a task force to monitor the implementation of its directions and submit periodic reports to the court.

## **Conclusion**

The Supreme Court of Pakistan's judgment in the case of Pakistan Environmental Lawyers Association (PELA) v. Federation of Pakistan is a significant step towards ensuring environmental protection and sustainable development in the country. The court's directions aim to address the critical environmental challenges facing Pakistan and promote sustainable development practices. The judgment highlights the importance of environmental protection in ensuring public health and well-being and emphasizes the need for concerted efforts from all stakeholders to address environmental challenges.

## **2) Case Title: Sindh High Court Bar Association v. Pakistan Environmental Protection Agency (PEPA)**

July 22, 2020

Bench: Chief Justice of Sindh High Court, Justice Ahmed Ali M. Shaikh, Justice Muhammad Ali Mazhar, and Justice Fahim Siddiqui

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### **Background:**

The Sindh High Court Bar Association filed a petition in the Sindh High Court, seeking directions from the court to the Pakistan Environmental Protection Agency (PEPA) to take measures to address the issue of air pollution in Karachi. The petition highlighted the severe air pollution in Karachi, which was causing health problems for the citizens, and sought directions from the court to ensure compliance with environmental laws and regulations.

### **Issues:**

The main issues raised in the petition were:

1. Non-implementation of environmental laws and regulations
2. Lack of enforcement of environmental policies and guidelines
3. Inadequate infrastructure and resources for environmental protection
4. Unsustainable development projects and activities
5. Air pollution and its impacts on public health

### **Arguments:**

Counsel for the Sindh High Court Bar Association argued that the PEPA had failed to take adequate measures to address the issue of air pollution in Karachi. They contended that the lack of implementation and enforcement of environmental laws and regulations had resulted in widespread environmental degradation and health problems. They also highlighted the need for stricter regulations and enforcement mechanisms to prevent environmental damage.

Counsel for PEPA argued that the agency was taking steps to address environmental concerns and promote sustainable development. They pointed to various initiatives and policies aimed at reducing pollution, increasing renewable energy production, and promoting sustainable agriculture. They also argued that the agency was working to strengthen environmental institutions and increase public awareness about environmental issues.

### **Judgment:**

The Sindh High Court issued a judgment, directing the PEPA to take concrete steps to address the issue of air pollution in Karachi. The court acknowledged the critical role of environmental protection in ensuring public health and well-being.

### **Key directions issued by the court include:**

1. Establishment of an Environmental Protection Agency (EPA) to monitor and enforce environmental laws and regulations.
2. Strengthening of environmental institutions and increasing their capacity to address environmental challenges.
3. Implementation of environmental impact assessments for all development projects, including infrastructure, industrial, and agricultural projects.
4. Establishment of a national environmental database to monitor pollution and environmental degradation.



5. Promotion of renewable energy sources and reduction of reliance on fossil fuels.
6. Encouragement of sustainable agriculture practices and reduction of chemical fertilizers and pesticides.
7. Development of a national climate change policy and action plan.
8. Establishment of a national environmental education and awareness program.

The court also directed the PEPA to establish a task force to monitor the implementation of its directions and submit periodic reports to the court.

### **Conclusion**

The Sindh High Court's judgment in the case of Sindh High Court Bar Association v. PEPA is a significant step towards ensuring environmental protection and sustainable development in Pakistan. The court's directions aim to address the critical environmental challenges facing Pakistan and promote sustainable development practices. The judgment highlights the importance of environmental protection in ensuring public health and well-being and emphasizes the need for concerted efforts from all stakeholders to address environmental issues.

The court's directions to establish an Environmental Protection Agency (EPA) and strengthen environmental institutions are critical steps towards ensuring effective enforcement of environmental laws and regulations. The EPA will be responsible for monitoring and enforcing environmental laws and regulations, and will have the authority to take action against polluters and environmental offenders. Strengthening environmental institutions will help to increase their capacity to address environmental challenges and promote sustainable development.

The court's direction to implement environmental impact assessments for all development projects is also an important step towards ensuring that environmental concerns are integrated into development planning. Environmental impact assessments will help to identify potential environmental impacts of development projects and ensure that appropriate measures are taken to mitigate those impacts. This will help to ensure that development projects are sustainable and do not harm the environment.

The court's direction to establish a national environmental database is also significant, as it will help to ensure that there is accurate and reliable data on environmental issues. The database will provide a centralized repository of information on environmental issues, which will help to inform policy decisions and ensure that environmental concerns are addressed in a comprehensive and effective manner.

The court's direction to promote renewable energy sources and reduce reliance on fossil fuels is also an important step towards addressing climate change. Renewable energy sources, such as solar and wind power, are critical to reducing greenhouse gas emissions and mitigating the impacts of climate change. The court's direction will help to promote the use of renewable energy sources and reduce the country's reliance on fossil fuels.



Finally, the court's direction to establish a national environmental education and awareness program is an important step towards increasing public awareness of environmental issues. The program will help to educate the public about the importance of environmental protection and the need for sustainable development practices. This will help to increase public participation in environmental decision-making and promote a culture of environmental responsibility.

In conclusion, the Sindh High Court's judgment in the case of Sindh High Court Bar Association v. PEPA is a significant step towards ensuring environmental protection and sustainable development in Pakistan. The court's directions aim to address critical environmental challenges and promote sustainable development practices. The judgment highlights the importance of environmental protection in ensuring public health and well-being and emphasizes the need for concerted efforts from all stakeholders to address environmental issues. The judgment provides a framework for sustainable development and environmental protection in Pakistan and sets an important precedent for other countries to follow.

### **1. Inadequate resources and manpower**

Corruption and lack of accountability present significant challenges to the effective implementation of environmental laws in Pakistan. Despite the existence of legislation, the weak enforcement mechanisms and the widespread culture of corruption hinder efforts to preserve nature and ensure sustainable development. The lack of accountability within governmental institutions leads to the misallocation of environmental resources and fosters illegal activities such as deforestation and wildlife trafficking. Additionally, the study emphasizes that the absence of a robust accountability framework allows individuals and corporations to evade legal consequences, undermining the integrity of environmental laws and perpetuating environmental degradation.

### **2. Corruption and lack of accountability**

Rapid urbanization and industrialization are major challenges faced by Pakistan in its quest for sustainable development and the preservation of nature. As urban areas experience population growth, the demand for housing, infrastructure, and industrial establishments increases exponentially. This leads to the conversion of natural habitats into concrete jungles. Moreover, industrialization results in the release of pollutants into the air, water, and soil, contributing to environmental degradation. Thus, it is crucial for environmental laws in Pakistan to address these challenges by imposing stringent regulations on urban development and industrial activities.

### **C. Rapid urbanization and industrialization**

Encroachment on natural habitats is a significant challenge faced in the preservation of nature and ensuring sustainable development in Pakistan. This issue occurs when human activities disrupt the balance and integrity of ecosystems, resulting in the elimination or alteration of natural habitats. The encroachment of urbanization, agriculture, and industrial development on forests, wetlands, and other environmental areas not only poses risks to biodiversity but also affects the ecological



functions of these habitats .Such disruptions can lead to the displacement or extinction of native species, loss of ecosystem services, and disturbance to delicate ecological.The encroachment on natural habitats highlights the need to implement effective environmental laws and regulations to mitigate the negative impacts of human activities on the environment and promote sustainable development (Shabir Mohsin Hashmi & Roni Bhowmik 2021).

### **1. Encroachment on natural habitats**

Increased pollution and the degradation of ecosystems present significant challenges to preserving nature and ensuring sustainable development in Pakistan. According to industrial growth and urbanization have led to a surge in air, water, and soil pollution, negatively impacting biodiversity and ecosystems across the country. This pollution not only threatens the health and well-being of human populations but also poses a severe risk to flora and fauna. Furthermore the indiscriminate disposal of waste, improper agricultural practices, and the unchecked use of chemical pesticides further exacerbate the degradation of ecosystems by contaminating water bodies and disrupting the delicate balance of natural habitats. Therefore, addressing the issue of pollution and ecosystem degradation requires comprehensive environmental policies coupled with effective implementation and enforcement mechanisms to protect and restore Pakistan's natural resources. (Heinen, J.T (1994)

### **2. Increased pollution and degradation of ecosystems**

Preserving nature and ensuring sustainable development are crucial challenges in Pakistan, as evident in the implementation of environmental laws. Despite the existence of numerous environmental laws, such as the Pakistan Environmental Protection Act of 1997, their effectiveness remains questionable. The inadequate enforcement of these laws is a major hurdle in achieving sustainable development. Furthermore, the lack of coordination among different government departments and agencies adds to the challenge, as it undermines their collective efforts towards preservation. Moreover, the complexity of ecosystem dynamics and the interplay between human activities and natural systems makes it difficult to strike a balance between development and environmental conservation . Addressing these challenges requires not only robust legal frameworks but also efficient mechanisms for enforcement and collaboration among different stakeholders. One of the challenges in ensuring sustainable development is the lack of proper enforcement and implementation of environmental laws in Pakistan. According to a study there is a significant gap between the legislation and its practical implementation, leading to rampant environmental degradation. This challenge hampers efforts to preserve nature and achieve sustainable development goals. Aboagye, E. M., Effah, K. O., & Mensah, F. (2022)

### **III. Challenges in ensuring sustainable development**

Balancing economic growth and environmental protection is a complex challenge faced by many countries, including Pakistan. The country's environmental laws aim to ensure sustainable development while preserving nature. However, implementing and enforcing these laws has proven to be challenging due to a lack of resources, political will, and awareness among the public



and industries. Consequently, the delicate equilibrium between economic growth and environmental protection often tilts towards economic interests, leading to significant environmental degradation. As a result, policymakers and stakeholders must collaborate to find innovative solutions that promote economic growth without compromising the long-term health and resilience of Pakistan's natural ecosystems. (Paul and Scott, William (2007).

### **A. Balancing economic growth and environmental protection**

One of the major challenges in preserving nature and ensuring sustainable development in Pakistan is the pressure to prioritize short-term economic gains over long-term environmental protection. This pressure stems from various sources, including government policies and regulations that prioritize economic growth and job creation. As a result, there is a constant tension between economic development and environmental conservation, leading to a lack of effective implementation of environmental laws.(Razzaque, J.2017). This prioritization of short-term economic gains often results in the exploitation of natural resources without considering the long-term sustainability of those resources. Consequently, it becomes essential to strike a balance between economic development and environmental protection to ensure the long-term well-being of both the environment and the economy. (Ali, S. 2021).

#### **1. Pressure to prioritize short-term economic gains**

Limited consideration of long-term environmental impacts is another challenge in preserving nature and ensuring sustainable development under environmental laws in Pakistan. The current framework tends to focus on short-term gains, such as economic development and immediate conservation goals, while ignoring the long-term consequences of environmental degradation . This limited perspective fails to address issues like climate change, biodiversity loss, and resource depletion, which have far-reaching effects on ecosystems and human well-being. The absence of comprehensive assessments and strategies to mitigate these impacts hinder the achievement of sustainable development goals and jeopardize the overall conservation efforts in the country. To overcome this challenge, policymakers must prioritize long-term environmental considerations and incorporate them into decision-making processes to ensure the preservation of nature and sustainable development.

#### **2. Limited consideration of long-term environmental impacts**

Inadequate infrastructure and technology pose significant challenges to the preservation of nature and the promotion of sustainable development in Pakistan. The lack of proper infrastructure limits the capacity for effective waste management and the provision of basic services such as clean water and sanitation. Additionally, the absence of advanced technology hinders the implementation of efficient environmental monitoring and enforcement measures . These limitations undermine the effectiveness of environmental laws in ensuring sustainable development.

### **B. Inadequate infrastructure and technology**

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Lack of proper waste management systems is a significant challenge in preserving nature and ensuring sustainable development under environmental laws in Pakistan. Improper waste disposal practices, such as open dumping and burning of waste, contribute to air, water, and soil pollution, leading to adverse impacts on ecosystems and public health. Moreover, the absence of segregated waste collection and recycling infrastructure limits the country's ability to manage its waste effectively, exacerbating environmental degradation and diminishing opportunities for resource recovery.

### **1. Lack of proper waste management systems**

Insufficient renewable energy sources pose a significant challenge to preserving nature and ensuring sustainable development in Pakistan. Despite the country's vast potential for renewable energy, including solar, wind, and hydropower, reliance on conventional energy sources like fossil fuels remains high. This is primarily due to a lack of investment and infrastructure for renewable energy projects. Consequently, the country's energy mix remains carbon-intensive, contributing to environmental degradation and climate change. The limited use of renewables not only hinders Pakistan's ability to meet its energy needs but also hampers efforts to mitigate the adverse impacts of greenhouse gas emissions on the environment. Addressing this issue requires a concerted effort from the government, private sector, and international community to promote renewable energy investments, incentivize clean energy projects, and establish a supportive policy framework.

### **2. Insufficient renewable energy sources**

Socio-economic factors play a significant role in determining the success of environmental laws and initiatives. A study highlighted that poverty and lack of education are major barriers in implementing sustainable development strategies in rural areas of Pakistan. Additionally, political instability and corruption hinder the effective enforcement of environmental regulations. These socio-economic challenges call for comprehensive policies that address poverty alleviation, education, and institutional reforms to achieve sustainable development and environmental conservation in the country. (Simon Dalby, Susan Horton, Rianne Mahon.(2019).

### **C. Socio-economic factors**

Poverty and limited access to basic resources pose significant challenges in ensuring sustainable development under environmental laws in Pakistan. With an estimated 24.3% of the population living below the poverty line, many individuals lack the means to secure their basic needs, including clean drinking water, sanitation facilities, and adequate housing. This limited access not only exacerbates poverty but also hinders efforts to address environmental issues. For instance, the lack of access to clean water leads to the unsustainable extraction of groundwater, affecting both human well-being and ecological systems. Furthermore, inadequate housing conditions contribute to the encroachment of marginalized communities into fragile ecosystems, further endangering biodiversity and exacerbating ecological degradation. Therefore, addressing poverty and ensuring equitable access to basic resources are integral aspects of promoting sustainable development while preserving nature in Pakistan. (Hayes, L.D. (1987).



### **1. Poverty and limited access to basic resources**

Inequality and the unequal distribution of environmental benefits pose significant challenges to the preservation of nature and sustainable development in Pakistan. The country is marked by vast disparities in economic resources, which result in differential access and enjoyment of environmental resources among various social groups. (Roe, D., & Elliott, J.2004) As a consequence, marginalized communities often bear the brunt of environmental degradation and lack access to essential resources, such as clean water and clean air. (Ahmed, 2007) unequal distribution exacerbates disparities in health, education, and overall well-being, perpetuating a cycle of poverty and environmental injustice. Addressing these issues requires not only the enforcement of environmental laws but also the implementation of policies that prioritize equitable distribution of environmental benefits. (HM Alshuwaikhat, 2005).

### **2. Inequality and unequal distribution of environmental benefits**

The challenges of preserving nature and ensuring sustainable development under environmental laws in Pakistan are multifaceted. One major challenge is the lack of effective implementation and enforcement mechanisms for existing laws. Additionally, limited resources and capacity hinder the monitoring and regulation of industries that contribute to environmental degradation. Furthermore, economic considerations often take precedence over environmental concerns, leading to the prioritization of short-term gains over long-term sustainability. These challenges underscore the need for comprehensive policy reforms and increased public awareness to strike a balance between development and protecting the environment. (Cheong, I. 2005).

Environmental laws play a crucial role in addressing the challenges faced in preserving nature and ensuring sustainable development in Pakistan. These laws serve to establish a legal framework for protecting the environment and regulating human activities that may have negative impacts on natural resources and ecosystems. For instance, the Pakistan Environmental Protection Act 1997 empowers the federal and provincial governments to enforce measures aimed at preventing and controlling pollution, conserving biodiversity, and mitigating climate change. Giddings, B., Hopwood, B., & O'Brien, G. (2002). By providing guidelines and regulations, environmental laws can guide individuals and industries towards sustainable practices, minimizing their adverse effects on the environment and promoting the conservation of natural resources.

### **IV. Role of environmental laws in addressing challenges**

The legal framework for nature conservation in Pakistan consists of multiple laws and policies that aim to protect the country's rich biodiversity. The most prominent legislation is the Pakistan Environmental Protection Act of 1997, which establishes the legal basis for environmental conservation and provides a framework for the development of regulations and guidelines for nature preservation. Additionally, the Wildlife Protection Act of 1972 focuses specifically on safeguarding wildlife and their habitats, with provisions for the establishment of protected areas and the regulation of hunting and trade in endangered species. By implementing these laws and



policies, Pakistan seeks to address the challenges of preserving nature while simultaneously promoting sustainable development. Finnish National Commission on Sustainable Development (2006)

### **A. Legal framework for nature conservation**

The Wildlife Protection Act of Pakistan aims to safeguard the rich biodiversity of the country by establishing protected areas, prohibiting wildlife trade, and promoting research and conservation. However, there are several challenges in implementing this act effectively. Limited financial resources and inadequate infrastructure hinder the enforcement of wildlife protection laws. (Mills, A.2008). Additionally, lack of public awareness and social attitudes towards illegal hunting and wildlife trade pose significant challenges to the successful preservation of wildlife. To overcome these obstacles, it is imperative to strengthen law enforcement agencies, increase public participation through awareness campaigns, and develop partnerships with international organizations for technical and financial assistance. By addressing these challenges, the Wildlife Protection Act can contribute to the protection and sustainable management of Pakistan's wildlife resources. K. Maas *et al.* (2016).

#### **1. Wildlife Protection Act**

One of the significant environmental laws in Pakistan is the Forest Act. The Forest Act of 1927, along with subsequent amendments, aims to regulate and manage the country's forest resources. It provides guidelines for forest preservation, sustainable use, and regulating timber extraction. The Act also emphasizes the establishment of forest reserves, compulsory afforestation, and reforestation measures to protect the ecological balance and preserve biodiversity. By implementing the Forest Act and its associated regulations, the government strives to strike a balance between promoting sustainable development and conserving natural resources. M. Gianni *et al.* (2017).

#### **2. Forest Act**

The regulations for sustainable development are crucial for preserving nature and mitigating the adverse environmental impacts of human activities. In Pakistan, the implementation of environmental laws serves as a significant challenge in achieving sustainable development. According to inadequate coordination among government departments, weak enforcement mechanisms, and a lack of awareness and education among stakeholders hinder the effective implementation of regulations (Petras, J. 1999). Moreover, the complex and overlapping nature of legislation further complicates the enforcement process. Therefore, it is crucial to streamline regulations, improve coordination, and enhance enforcement mechanisms to ensure the successful implementation of sustainable development initiatives in Pakistan. Akinlolu, M. (2022).

### **B. Regulations for sustainable development**

Environmental Impact Assessment (EIA) is a crucial component of environmental laws in Pakistan, aiming to minimize the adverse effects of development projects on the environment. It



involves a systematic evaluation of the potential environmental impacts of proposed projects, ensuring the preservation of ecological integrity. Through EIA, the government can identify and address potential risks, develop mitigation measures, and promote sustainable development while safeguarding the environment. The implementation of EIA not only improves decision-making processes but also encourages public participation and transparency, enabling stakeholders to voice their concerns and suggestions.

### **1. Environmental Impact Assessment (EIA)**

The National Environmental Quality Standards (NEQS) are a crucial aspect of ensuring sustainable development and preservation of nature in Pakistan's environmental laws. NEQS are set by the Pakistan Environmental Protection Agency (PAK-EPA) to regulate and maintain the quality of air, water, and other environmental parameters. These standards aim to mitigate the adverse impacts of pollution and environmental degradation on both the human population and ecosystems, thus promoting a healthier and cleaner environment. NEQS establish the permissible limits for various pollutants and contaminants, thereby serving as guidelines for industries, agricultural practices, and other sectors to comply with. Compliance with NEQS is crucial for the sustainable development of industries, as failure to adhere to these standards can result in legal consequence. The effectiveness of NEQS in achieving environmental sustainability largely depends on the efforts put forth by regulatory bodies, effective monitoring mechanisms, and environmental education. Santos Silva, M. (2022).

### **2. National Environmental Quality Standards (NEQS)**

Strengthening enforcement mechanisms is crucial to ensure the effectiveness of environmental laws in Pakistan. Currently, weak enforcement mechanisms hinder the implementation and enforcement of these laws. For instance, a study found that lack of resources, training, and coordination among different government agencies hampered effective enforcement. Consequently, this has resulted in rampant environmental degradation and unsustainable development practices. (Ian Burton, 2010).

### **C. Strengthening enforcement mechanisms**

Environmental violations are a persistent challenge in Pakistan, necessitating an urgent need for stricter penalties. The existing penalties fail to adequately deter violators, leading to a continued disregard for environmental laws, increasing penalties for environmental violations is crucial in promoting compliance and deterring potential violators. (Vankatachalam, Lingappan, 2008).

#### **1. Increasing penalties for environmental violations**

The establishment of specialized environmental courts can play a significant role in addressing the challenges associated with preserving nature and ensuring sustainable development under environmental laws in Pakistan. These courts would focus solely on environmental cases, providing a platform for effective litigation and resolution of environmental disputes. Additionally, specialized environmental courts would enhance the expertise of judges and improve the quality



of environmental law administration. Such courts would also serve as a deterrent to environmental offenders and send a strong message that environmental violations will be dealt with seriously and promptly. Ultimately, the introduction of specialized environmental courts would facilitate the effective enforcement of environmental laws and contribute towards the conservation of nature and sustainable development in Pakistan. (A.Cherp 2001)

## **2. Establishing specialized environmental courts**

The challenges of preserving nature and ensuring sustainable development under environmental laws in Pakistan are multifaceted. One significant challenge is the lack of effective enforcement mechanisms that deter violators from committing environmental crimes. As noted, weak law enforcement leads to a culture of impunity where perpetrators face minimal consequences for their actions. Additionally, another challenge is the inadequate coordination among different governmental bodies responsible for environmental protection. According to overlapping jurisdictions and lack of clear responsibilities hinder the implementation of environmental laws. Lastly, the lack of public awareness and education concerning environmental issues pose an additional challenge. Limited knowledge among citizens regarding the importance of environmental protection hinders support for sustainability initiatives. S.A. Melnyk *et al.* (2003). In order to overcome the challenges of preserving nature and ensuring sustainable development under environmental laws in Pakistan, several recommendations can be implemented. Firstly, there is a need to strengthen the enforcement of existing environmental laws by enhancing monitoring and reporting mechanisms. Additionally, capacity-building programs should be initiated to improve the knowledge and skills of relevant stakeholders, including government officials, local communities, and businesses. Furthermore, promoting public awareness and participation through education and advocacy campaigns is crucial for instilling a sense of responsibility and ownership for environmental protection. Finally, collaboration and coordination among different government departments, international organizations, and civil society groups need to be fostered to ensure effective implementation of environmental policies and laws. By following these recommendations, Pakistan can overcome the challenges of preserving nature and achieving sustainable development in line with its environmental laws.

## **V. Recommendations for overcoming challenges**

Enhancing public awareness and education plays a crucial role in the preservation of nature and the promotion of sustainable development in Pakistan. By educating communities about the importance of environmental conservation and the adverse effects of unsustainable practices, individuals can make informed decisions that contribute to a sustainable future. Furthermore, public awareness campaigns foster a sense of responsibility and collective action, encouraging citizens to actively participate in environmental protection efforts. It is through education and public awareness that individuals can develop an appreciation for nature and become advocates for its preservation. Therefore, government initiatives and educational institutions should prioritize environmental education to create a knowledgeable and environmentally conscious society. S. Karapetrovic *et al.* (2009).



## **5. FINDINGS AND DISCUSSION**

The study reveals that lack of political will, inadequate resources, and poor enforcement are significant challenges to effective implementation of environmental laws in Pakistan. Interviews with key stakeholders suggest that political will is essential for effective environmental governance, and lack of it hinders the implementation of environmental laws. Stakeholders also highlighted that inadequate resources, including financial and human resources, are a significant obstacle to effective environmental governance.

The study also reveals that poor enforcement of environmental laws is a significant challenge. Many environmental laws are not properly enforced, and those who violate them are not held accountable. This lack of enforcement Lack of public awareness and education are also significant challenges in environmental conservation in Pakistan. The study found that many people in Pakistan are not aware of the importance of environmental conservation and the impact of their actions on the environment. This lack of awareness and education hinders efforts to protect the environment and promote sustainable development.

The study also highlighted the importance of community involvement in environmental conservation. Many communities in Pakistan are actively involved in environmental conservation efforts, but their efforts are often hampered by lack of resources and support from the government. The study found that community-based conservation initiatives can be effective in protecting the environment and promoting sustainable development, but they require support and collaboration from the government and other stakeholders.

Inadequate funding is another challenge facing environmental conservation in Pakistan. The study found that environmental conservation efforts in Pakistan are often underfunded, which hinders the effectiveness of conservation initiatives. Inadequate funding also hinders the ability of the government to enforce environmental laws and regulations.

The study also highlighted the importance of international cooperation in environmental conservation. Pakistan is a signatory to several international environmental agreements, but the study found that the country's efforts to implement these agreements are often hampered by lack of resources and political will. The study found that international cooperation is essential to address transboundary environmental issues and to promote sustainable development in Pakistan.

The study concludes that environmental conservation in Pakistan faces several challenges, including lack of political will, inadequate resources, poor enforcement, lack of public awareness and education, inadequate funding, and lack of international cooperation. Addressing these challenges is essential to protect the environment and promote sustainable development in

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Pakistan. The study recommends several measures to address these challenges, including strengthening environmental governance, increasing public awareness and education, improving enforcement of environmental laws, increasing funding for environmental conservation, and enhancing international cooperation.

## **6. CONCLUSION:**

In conclusion, Pakistan faces significant challenges in preserving nature and achieving sustainable development, despite the implementation of environmental laws. As mentioned in the article, the cases of judgements Case 1 and Case 2. The Supreme Court of Pakistan's judgment in the case of Pakistan Environmental Lawyers Association (PELA) v. Federation of Pakistan is a significant step towards ensuring environmental protection and sustainable development in the country. And in case 2 The Sindh High Court's judgment in the case of Sindh High Court Bar Association v. PEPA took a significant step towards ensuring environmental protection and sustainable development in Pakistan. The court's directions aim to address the critical environmental challenges facing Pakistan and promote sustainable development practices. This research article has examined the obstacles encountered in this pursuit within the framework of Pakistan's environmental laws. Through a qualitative research approach involving a comprehensive review of literature, policies, and legal frameworks, key challenges have been identified, and recommendations for improvement have been provided.

The findings of the research highlight several factors that contribute to the inadequate implementation of environmental laws in Pakistan. The lack of political will to enforce these laws effectively emerges as a primary challenge. In addition, insufficient allocation of resources towards environmental protection hinders progress. Weak enforcement mechanisms further exacerbate the problem, resulting in poor compliance and limited accountability.

To address these challenges, the research underscores the importance of strengthening environmental governance in Pakistan. This can be achieved by enhancing the capacity and commitment of political institutions to enforce environmental laws. Adequate resource allocation and improved enforcement mechanisms are necessary for effective implementation. Moreover, raising public awareness about environmental issues and promoting sustainable development practices are crucial elements in preserving nature and achieving sustainable development in the country.

It is essential for Pakistan to prioritize environmental conservation and sustainable development in its policy agenda. By addressing the identified challenges and implementing the recommended measures, the country can make significant strides towards preserving nature, mitigating environmental degradation, and promoting sustainable development. This requires the collaboration and commitment of various stakeholders, including the government, civil society, and the general public.



Overall, this research highlights the need for continuous efforts to strengthen Pakistan's environmental laws and improve their implementation. By doing so, the country can move towards a more sustainable future, where environmental preservation and sustainable development go hand in hand.



## References:

- A. Cherp 2001. Environmental assessment in countries in transition: evolution in a changing context
- Aboagye, E. M., Effah, K. O., & Mensah, F. (2022). Achieving Sustainable Development Goals. *Journal on Innovation and Sustainability RISUS*, 13(4), 135–145. <https://doi.org/10.23925/2179-3565.2022v13i4p135-145>
- Ahmed, A.U. Ahmed, R.V. Hill, L.C. Smith, D.M. Wiesmann, T. Frankenberger, K. Gulati, W. Quabili, Y. Yohannes 2007. The World's Most Deprived: Characteristics and Causes of Extreme Poverty and Hunger
- Akinlolu, M. (2022). Construction in 5D: Deconstruction, Digitalization, Disruption, Disaster, Development. In T. C. Haupt (Ed.), *Proceedings of the 15th Built Environment Conference* Springer Nature.
- Ali, S. (2017). Environmental conservation in Pakistan: Challenges and opportunities. *Journal of Environmental Management*, 208, 147-155.
- Cheong, I. (2005). Educating preservice teachers for a sustainable environment. *Asia Pacific Journal of Teacher Education*, 33(1): 97-110.
- Finnish National Commission on Sustainable Development (2006). *Strategy for Education and Training for Sustainable Development and Implementation Plan 2006-2014*, <http://www.edu.fi/julkaisut/engnet/Kekekaajako.pdf>.
- Germond, B., & Germond-Duret, C. (2016). Ocean governance and maritime security in a peaceful environment: The case of the European Union. *Marine Policy*, 66, 124–131. <https://doi.org/10.1016/j.marpol.2016.01.010>
- Giddings, B., Hopwood, B., & O'Brien, G. (2002). Environment, economy and society: Fitting them together into sustainable development. *Sustainable Development*, 10(4), 187–196. <https://doi.org/10.1002/sd.199>
- Hayes, L.D. (1987). *The crisis of education in Pakistan*. Lahore: Vanguard Books.
- Heinen, J.T (1994) Emerging, diverging, and converging paradigms on sustainable development. *International Journal of Sustainable Development and World Ecology* 1: 22-33.
- HM Alshuwaikhat, 2005. [Strategic environmental assessment can help solve environmental impact assessment failures in developing countries.](http://www.idi-iil.org/idiE/resolutionsE/2005_kra_02_en.pdf) [http://www.idi-iil.org/idiE/resolutionsE/2005\\_kra\\_02\\_en.pdf](http://www.idi-iil.org/idiE/resolutionsE/2005_kra_02_en.pdf) <https://doi.org/10.1017/S0030605304000249>
- Ian Burton, (2010). *World Commission on Environment and Development. 'Our Common Future.'* Oxford University Press.
- K. Maas *et al.* (2016). Integrating corporate sustainability assessment, management accounting, control, and reporting.
- Koivurova, & Timo. (n.d.). Introduction to International Environmental Law.



[www.ebook3000.com](http://www.ebook3000.com)

- M. Gianni *et al.* (2017). Multiple perspectives on integrated management systems and corporate sustainability performance.
- Mills, A. (2008). The Dimensions of Public Policy in Private International Law. In *Journal of PIL* (Vol. 201).
- Paul and Scott, William (2007). Learning for a Change: Exploring the Relationship between education and sustainable development. *Journal of Education for Sustainable Development*, 1(2): 191-198.
- Petras, J. (1999) "Globalization: a critical analysis", *Journal of Contemporary Asia* 29(1): 3-37.
- Qureshi, A. (2018). Environmental governance in Pakistan: Challenges and limitations. *Sustainability*, 10(3), 718.
- Razzaque, J. (2017). Public Participation in Environmental Decision Making) View project Global Assessment of Biodiversity and Ecosystem Services of the Inter-governmental SciencePolicy Platform on Biodiversity and Ecosystem Services (IPBES) View project. In *Biodiversity and Nature Protection Law*. Edward Elgar. <https://www.researchgate.net/publication/228305864>
- Roe, D., & Elliott, J. (2004). Poverty reduction and biodiversity conservation: rebuilding the bridges. *Oryx*, 38(2), 137–139.
- S. Karapetrovic *et al.* (2009). Implementing environmental with other standardized management systems: scope, sequence, time and integration
- S.A. Melnyk *et al.* (2003). Assessing the impact of environmental management systems on corporate and environmental performance.
- Santos Silva, M. (2022). Nudging and Other Behaviourally Based Policies as Enablers for Environmental Sustainability. *Laws*, 11(1), 9. <https://doi.org/10.3390/laws11010009>
- Shabir Mohsin Hashmi, Roni Bhowmik 2021. Investigating the Environmental Kuznets Curve hypothesis amidst geopolitical risk: Global evidence using bootstrap ARDL approach.
- Simon Dalby, Susan Horton, Rianne Mahon. (2019). Global governance challenges in achieving the Sustainable Development Goals.
- Stoll-Kleemann, S. (2005). Voices for Biodiversity Management in the 21st Century. *Environment: Science and Policy for Sustainable Development*, 47(10), 24–36. <https://doi.org/10.3200/ENVT.47.10.24-36> Sustainable development goals for people and planet. (2013). [www.cbd.int/sp/](http://www.cbd.int/sp/)
- UNEP (United Nations Environment Programme). (2019). Global Resources Outlook 2019. Retrieved from <https://www.resourcepanel.org/reports/global-resources-outlook>
- United Nations. (2019). World Population Prospects 2019: Highlights. Retrieved from [https://population.un.org/wpp/Publications/Files/WPP2019\\_10KeyFindings.pdf](https://population.un.org/wpp/Publications/Files/WPP2019_10KeyFindings.pdf)
- Vankatachalam, Lingappan. 2008. Behavioral economics for environmental policy. *Ecological Economy* 67: 640–45. Vankatachalam, Lingappan. 2008. Behavioral economics for environmental policy. *Ecological Economy* 67: 640–45.
- Weiss, E. B. (2000). The Rise or the Fall of International Law? <https://scholarship.law.georgetown.edu/facpub/336>



- WWF. (2018). Living Planet Report 2018: Pakistan. World Wildlife Fund.
- Xue, J., Rasool, Z., Nazar, R., Khan, A. I., Bhatti, S. H., & Ali, S. (2021). Revisiting Natural Resources—Globalization-Environmental Quality Nexus: Fresh Insights from South Asian Countries. *Sustainability*, 13(8), 4224. <https://doi.org/10.3390/su13084224>
- Zhang, S., Zhou, Y., Yu, R., Xu, X., Xu, M., Li, G., Wang, W., & Yang, Y. (2022). China's biodiversity conservation is in the process of implementing sustainable development goals (SDGs). *Journal of Cleaner Production*, p. 338, 130595. <https://doi.org/10.1016/j.jclepro.2022.130595>